

Claims

1. A low pressure beverage preparation system for  
automatically preparing a range of beverage types from  
5 a range of beverage cartridges, the system comprising:  
a beverage preparation machine;  
and a plurality of beverage cartridges, each  
beverage cartridge containing one or more beverage  
ingredients associated with a specific beverage type,  
10 wherein the beverage preparation system comprises:  
a. means for receiving one of said plurality of  
beverage cartridges in said beverage preparation  
machine and means for supplying, in use, to said  
beverage cartridge an aqueous medium at a pressure  
15 of less than 2 bar to produce a beverage from the  
one or more beverage ingredients contained  
therein;  
b. a reader in said beverage preparation machine for  
automatically interpreting a code written on said  
20 beverage cartridge;  
c. processing means for creating a specific brewing  
cycle based on said code;  
d. means for automatically adjusting a temperature of  
said aqueous medium based on said code prior to  
25 supply of said aqueous medium to the beverage  
cartridge;  
e. means in at least some of said plurality of  
beverage cartridges for optionally, dependant on  
beverage type, producing foaming of the beverage;  
30 and

f. a user interface for initiating an operating cycle;  
wherein the beverage preparation system can produce a range of beverage types including at least, but not limited to, filtered coffee, cappuccino, tea, chocolate and frothed milk, and wherein operation of the user interface is independent of the beverage type being dispensed.

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- 10 2. A low pressure beverage preparation system as claimed in claim 1 wherein the range of beverage types includes coffee, tea, chocolate, milk, soup and fruit juices.
- 15 3. A low pressure beverage preparation system as claimed in claim 2 wherein the beverage preparation machine further comprises means for purging the beverage cartridge after dispensing of the beverage.
- 20 4. A low pressure beverage preparation system as claimed in claim 3 further comprising means for controlling the flow rate of aqueous medium into the cartridge.
- 25 5. A low pressure beverage preparation system as claimed in claim 4 further comprising means for controlling the volume of aqueous medium delivered to the cartridge.
- 30 6. A low pressure beverage preparation system as claimed in claim 5 wherein one or more of the beverage ingredients is a liquid.

7. A low pressure beverage preparation system as claimed in claim 6 wherein one or more of the beverage ingredients is dairy-based.
- 5 8. A low pressure beverage preparation system as claimed in claim 7 wherein the system may also be used with one or more cartridges comprising one or more non-beverage ingredients, for preparation of non-beverage products, such as sauces and desserts.
- 10 9. A low pressure beverage preparation system comprising a beverage preparation machine and a plurality of beverage cartridges, each beverage cartridge containing one or more beverage ingredients, wherein the beverage
- 15 preparation machine comprises processing means and a memory for storing information about the beverage cartridges dispensed by the beverage preparation machine.
- 20 10. A low pressure beverage preparation system as claimed in claim 9 wherein the memory stores information about the beverage ingredients contained in the beverage cartridges dispensed by the beverage preparation machine.
- 25 11. A low pressure beverage preparation system as claimed in claim 10 wherein the memory stores information about the order of beverage cartridges dispensed by the beverage preparation machine.
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12. A low pressure beverage preparation system as claimed in claim 11 wherein the reader is an optical bar code reader.
- 5 13. A low pressure beverage preparation system as claimed in claim 12 being a domestic low pressure beverage preparation system.
- 10 14. A method of preparing at least one of a range of beverages comprising the steps of:
- a. inserting at least one beverage cartridge containing one or more beverage ingredients into a low pressure beverage preparation machine;
  - 15 b. operating a user interface of said beverage preparation machine to initiate an operating cycle;
  - c. operating a reader to detect a code written on said beverage cartridge;
  - d. creating a specific brewing cycle based on said code;
  - 20 e. passing an aqueous medium through the beverage cartridge to produce a beverage, wherein the temperature pre-wet, volume, flow rate and air purge of the aqueous medium is set based on the code;
  - f. for at least some of the range of beverages, producing foaming of the beverage;
- 25 wherein the method can produce a range of beverage type using one or more beverage cartridges including at least, but not limited to, filtered coffee, cappuccino, tea, chocolate and frothed milk, and wherein operation of the user interface is independent of the beverage
- 30 type being dispensed.

15. A method of preparing a beverage comprising the steps of:

- 5           a. inserting a first beverage cartridge containing one or more beverage ingredients into a beverage preparation machine;
- b. operating said beverage preparation machine to pass an aqueous medium through the first beverage cartridge at a pressure of less than 2 bar to dispense a first portion of said beverage  
10           into a receptacle;
- c. storing in a memory of said beverage preparation machine information on the type of the first beverage cartridge;
- d. inserting a second beverage cartridge containing  
15           one or more beverage ingredients into the beverage preparation machine; and
- e. operating the beverage preparation machine to pass an aqueous medium through the second beverage cartridge at a pressure of less than 2  
20           bar to dispense a second portion of said beverage into the receptacle;
- wherein one or more operating parameters of the beverage preparation machine during dispensing of the second beverage cartridge are set with  
25           reference to the information stored in the memory on the type of the first beverage cartridge.

16. A method as claimed in claim 15 further comprising  
30           using additional beverage cartridges to dispense three or more portions of a beverage.

17. A method as claimed in claim 16 wherein the one or more operating parameters include:

- I. the temperature of the aqueous medium passed through the beverage cartridge;
- II. the flow rate of the aqueous medium;
- III. the presence or absence of a pre-wet stage;
- IV. the presence or absence of an air-purge stage;
- V. the pressure of the aqueous medium; and/or
- VI. the total volume of aqueous medium dispensed.

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